Work Order ID 114757

March-11-14 4:12:37 PM

114757

Item ID: D4634-3 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Middle, Center Ceiling Panel

Start Date: 12/03/2014 **Start Qty:** 1.00 *1*

Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*

Reference:

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

Approvals: **Process Plan:** MCS **Date:** 14-03-12 **Tooling:** _____ **Date:** _____

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	HAND FINISHING THERMOFORMING	0.00							DAS 07 9-89
100 Thermoform	**Memo** Cut Blanks	0.00				X1			14/04/02
Thermoforming Machine									
105	Dry Material	0.00							DAS 07 9-89
105 HandThermo	**Memo** Dry Sheet as per QSI022 POLYCARBONATE	0.00				X1			14/04/02
Hand Finishing Thermoforming	Temp: 245 deg. F Time IN: 5:00 PM Time OUT: 6:00 AM								

APR 0 2 2014

Per.....

Draw Nbr	Revision Nbr
D4634	F

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Item ID: D4634-3 **Accept** *N9000040100* **Setup Start** *NS1*
Revision ID: **Stop** *NS2*
Item Name: Middle, Center Ceiling Panel
Start Date: 12/03/2014 **Start Qty:** 1.00 *1*
Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*
Reference:
Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110		0.00							DAS 07 9-89
110	THERMOFORMING MACHINE					X1			14/04/02
Thermoform	**Memo**	0.00							
Thermoforming Machine	Thermoform as per Dwg. D4634-3 and Folio FTA145								
	Dwg. Rev. F								
	Folio Rev. D								
	Visually inspect for proper formation and texture								
130		0.00							
130	HAND FINISHING THERMOFORMING					X1			14/04/29
Thermoform	**Memo**	0.00							
Thermoforming Machine	Trim to Finished Dimensions								
140	DCS ~~QCS~~ Inspect dimensions to drawing	0.00							DAS 16 9-89 14/04/30
140	Dimensional Inspection								
QC	**Memo**	0.00							
Quality Control	Fill out Inspection Sheet Rev. A								

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
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☐ Cracks
☐ Crimp/Kink/Ripple/Wave
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☐ Crushing
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☐ Over/Under tolerance
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☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Item ID: D4634-3
Revision ID:
Item Name: Middle, Center Ceiling Panel
Start Date: 12/03/2014 **Start Qty:** 1.00 *1*
Required Date: 12/03/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC5- Inspect part completeness to step on W/O	0.00							
150		MLS							
QC	**Memo**	0.00							
Quality Control									
160		0.00							
160	Packaging								
Packaging	**Memo** MF	0.00							
Packaging									
170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	**Memo**	0.00							
Quality Control									

1 SAD 14/04/30

MLS 14-05-01

14-04-30

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐ ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

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General

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☐ Inspection Incomplete/Unqualified
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☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Picklist Print

March-11-14 4:15:22 PM

Work Order ID: 114757 *114757*

Parent Item: D4634-3 *D4634-3*

Parent Item Name: Middle, Center Ceiling Panel

Start Date: 12/03/2014 **Required Date:** 12/03/2014

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev. A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B Dwg. Update 13/07/09 DL verf:DD IPP Rev C Dwg Update, Material Change 13/12/18 DL IPP Rev D 14/01/20 Dwg. Update DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	840.7600	17.33	18			
MLEXS.093-F6006-07									**				
GE PLASTICS LEXAN SHEET													

Location	Loc Qty	Loc Code
MAT023	840.76	
114459	229.26	
123105	38	
124501	573.5	

17866

18 sq ft

DL 14/04/30.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

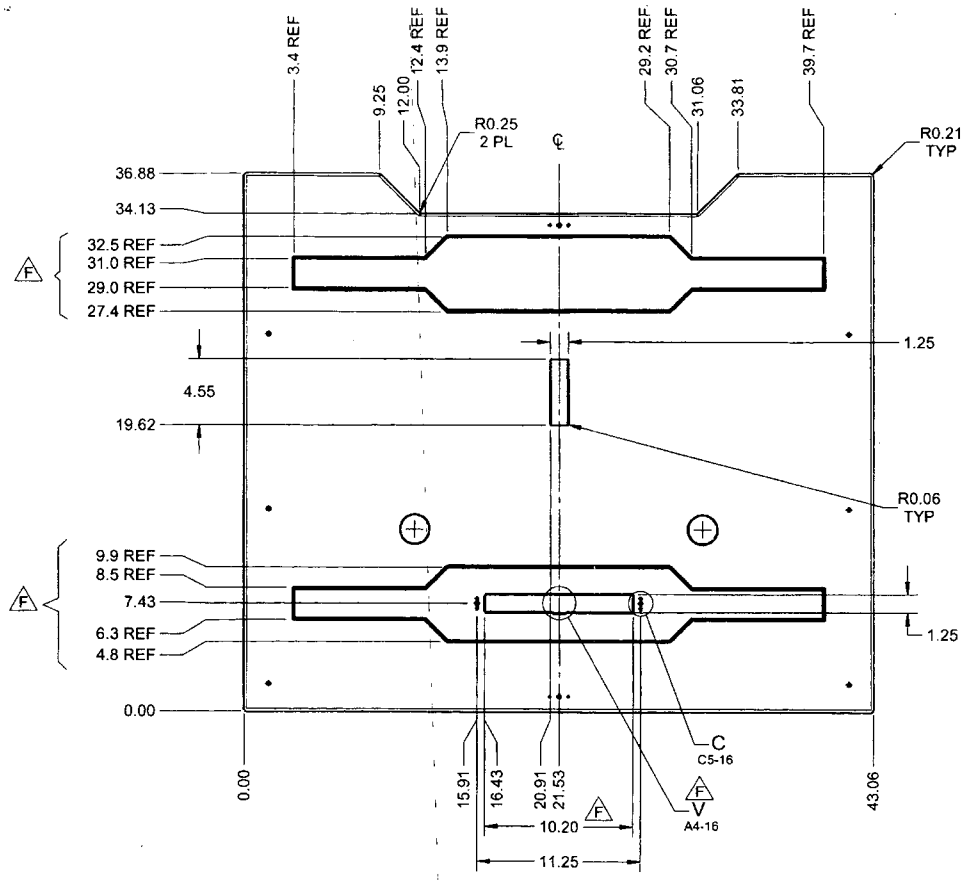
FAULT CATEGORY

Landing Gear

- ☐ Bending
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- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other



114757 MCJ
14-03-12

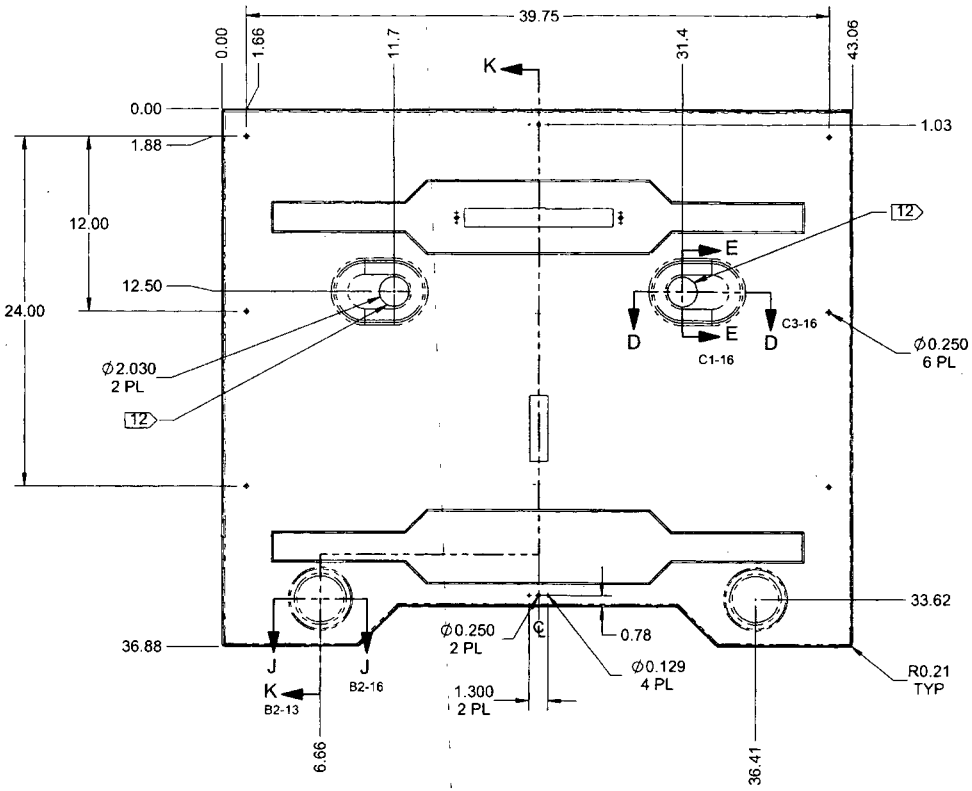
NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK
(REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 6.49 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-3 PER TOOL DT9837
11) THERMOFORM PER QSI 022 USING DT9845 TOOL
MIN. THICKNESS AFTER FORMING:
EDGES = 0.060
ELSEWHERE = 0.070
12) LOCATE ∅2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

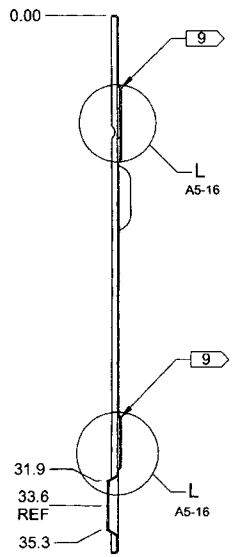
D4634-3 MIDDLE, CENTER CEILING PANEL

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4634 REV. F
CHECKED	JC	SHEET 12 OF 17
MFG. APPR.		TITLE CENTER CEILING PANELS SCALE NTS
APPROVED		
DE APPR.		
DATE	14.02.03	

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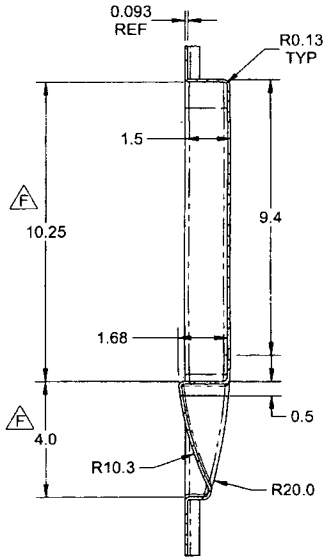
SECTION K-K B6-13

D4634-3 MIDDLE, CENTER CEILING PANEL
AUXILIARY VIEW

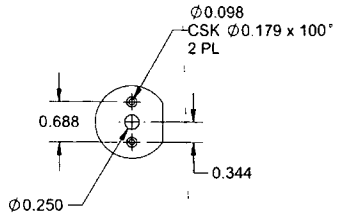
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	DC	DRAWING NO. REV. F
MFG. APPR.		D4634 SHEET 13 OF 17
APPROVED		TITLE SCALE
DE APPR.		CENTER CEILING PANELS NTS
DATE	14.02.03	

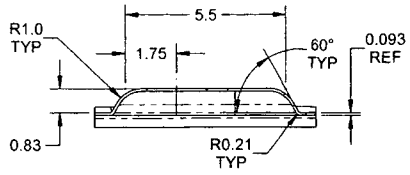
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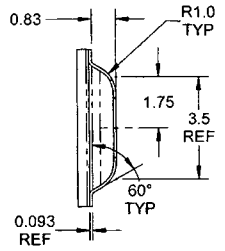
SECTION G-G C5-11
SCALE 4X



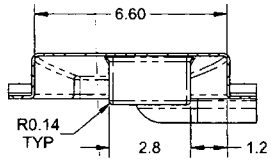
DETAIL C B7-10 B4-12 B4-14
SCALE 4X



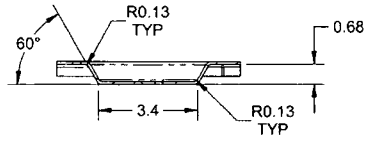
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SCALE 2X



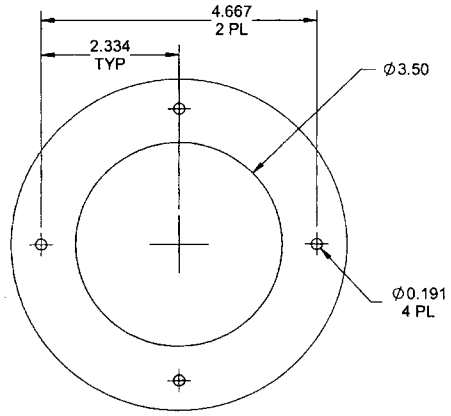
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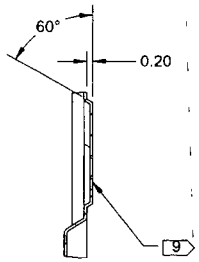
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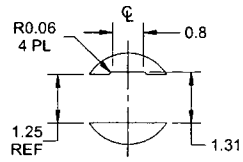
SECTION J-J B6-13
SCALE 2X



DETAIL B B7-10
SCALE 4X
2 PL



DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

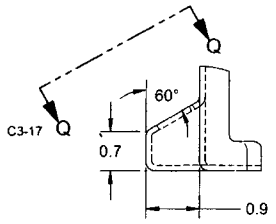


F DETAIL V C4-10 B4-12 C4-14
SCALE 2X
SIMILAR

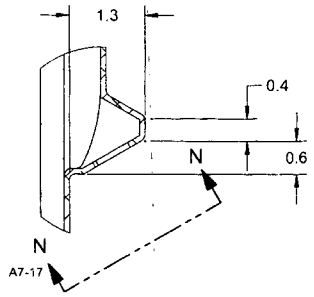
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4634 REV. F
CHECKED	DC	SHEET 16 OF 17
MFG. APPR.		TITLE CENTER CEILING PANELS SCALE NTS
APPROVED		
DE APPR.		
DATE	14.02.03	

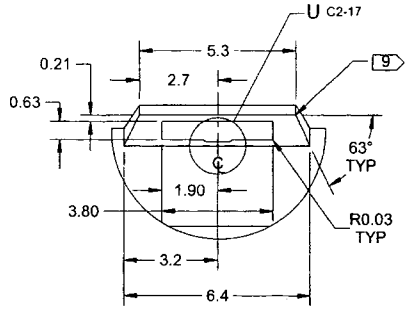
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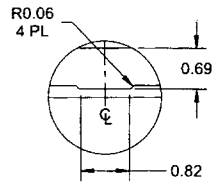
DETAIL P B3-14
SCALE 2X



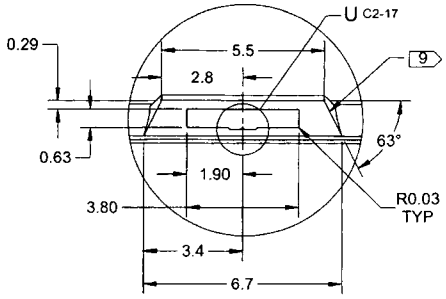
DETAIL M C3-10
SCALE 2X



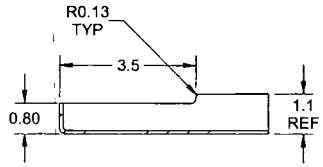
DETAIL Q B4-15 D8-17
SCALE 0.5X



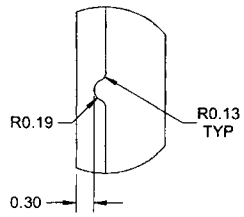
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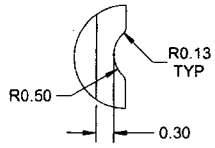
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SCALE 0.5X



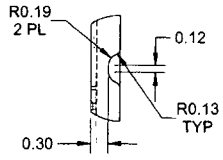
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	DC	DRAWING NO. D4634 REV. F
MFG. APPR.	DC	SHEET 17 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.02.03	

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DART AEROSPACE LTD

Description: Middle, center Ceiling Panel		Work Order: 114757
Inspection Drawing: 4634-3	Rev: F	Part Number: D4634-3

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
15.91	±0.030	15.91	✓			
10.20	±0.030	10.20	✓			
11.25	±0.030	11.25	✓			
1.25	±0.030	1.25	✓			
4.55	±0.030	4.55	✓			
1.25	±0.030	1.25	✓			
21.53	±0.030	21.53	✓			
24.00	±0.030	24.00	✓			
12.00	±0.030	12.00	✓			
39.75	±0.030	39.75	✓			
1.300	±0.010	1.300	✓			
Ø0.250	+0.005 -0.001	.250	✓			
Ø0.129	+0.005 -0.001	.129	✓			
Ø0.250	+0.005 -0.001	.250	✓			
Ø2.030	+0.012 -0.001	2.040	✓			
Ø.250	+0.005 -0.001	.250	✓			
0.688	±0.010	.688	✓			
Ø0.098	+0.004 -0.001	.098	✓			
0.344	±0.010	.344	✓			

Measured by:	Checked By:	QC inspector:	Engineering Approval (*if necessary*):
Date 14/04/30	DAS 16 9-89 Date 14/04/30	DAS 16 9-89 Date 14/04/30	Date